KARNATAKA TEST HOUSE PVT LTD.

MATERIAL TESTING LABORATORY

NABL Accredited Laboratory as per ISO/IEC 17025

NABL Accredited Lab Certificate No.T-0901

Report No. : KTH/C.AGG/1875-3172/2013-2014 **Date: 06.12.2013**

TEST REPORT ON AGGREGATE
(Coarse Aggregate)

Name of the Customer* : **The Assistant Executive Engineer,**
Vidyaranyapura Sub Division,
BBMP, Bangalore - 97.

Name of the Project* : Improvements to roads in Kuvempunagara 1st stage Rajakaluve beside roads in Ward No. 11.

Name of Contractor* : Mr. Subbanna, Bangalore.

Source of Sample : Supplied by the Customer.

Sample Received on : 02.12.2013.

Technical Reference : IS : 2386 Part I to VIII– 1963 (Reaffirmed-2002), IS : 383 – 1970.

Sieve Analysis of Coarse Aggregate - 40mm & down size

Sl. No.	Sieve size mm	% Passing	IS : 383-1970 Stipulations		Remarks
			Single Size	Graded Size	
1	63	100	100	100	Sample confirms to Single Size of IS: Stipulation for 40mm size Aggregate Fails for Graded Stipulation.
2	40	86.3	85 to 100	95 to 100	
3	20	8.4	0 to 20	30 to 70	
4	12.5	-	0 to 20	-	
5	10	-	0 to 5	10 to 35	
6	4.75	-	-	0 to 5	

Sl. No.	Test Conducted	Identification mm	Results	IS : 383 – 1970 Stipulations
1	Flakiness Index (%)	40	12.56	Not specified
2	Elongation Index (%)	40	16.98	Not specified
3	Impact Value (%)	40	23.60	Shall not be more than 45% for Concrete and 30% for Wearing surfaces, such as runways, roads and pavements.

* As furnished by the Customer

For **KARNATAKA TEST HOUSE PVT. LTD.**

6/12/13

KARNATAKA TEST HOUSE PVT LTD NABL Accredited Laboratory

(SREENIVASA.C)
TECHNICAL MANAGER

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778/44, Gokul 1st Stage, 2nd Phase, 8th Cross, Triveni Road, Yeshwanthpur, Bangalore - 560 054.
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Report No. : KTH/F.AGG/1875-3173/2013-2014 **Date: 06.12.2013**

TEST REPORT ON AGGREGATE

(Fine Aggregate)

Name of the Customer* : **The Assistant Executive Engineer,**
Vidyaranyapura Sub Division,
BBMP, Bangalore - 97.

Name of the Project* : Improvements to roads in Kuvempunagara 1st stage Rajakaluve beside roads in Ward No. 11.

Name of Contractor* : Mr. Subbanna, Bangalore.

Source of Sample : Supplied by the Customer.

Sample Received on : 02.12.2013.

Technical Reference : IS : 2386 Part I to VIII– 1963 (Reaffirmed-2002), IS : 383 – 1970.

Sieve Analysis of Fine Aggregate (River Sand)

Sl. No.	Sieve size mm	% Passing	IS : 383 – 1970 Specification				Remarks
			% passing for Zone I	% passing for Zone II	% passing for Zone III	% Passing for Zone IV	
1	10	100	100	100	100	100	Falls in Zone –II as per table 4 of IS-383 – 1970 Suitable for Construction.
2	4.75	96.1	90 – 100	90 – 100	90 – 100	95 - 100	
3	2.36	77.9	60 – 95	75 – 100	85 – 100	95 - 100	
4	1.18	61.2	30 – 70	55 – 90	75 – 100	90 - 100	
5	0.600	36.7	15 – 34	35 – 59	60 – 79	80 - 100	
6	0.300	10.3	5 – 20	8 – 30	12 – 40	15 to 50	
7	0.150	1.9	0 – 10	0 – 10	0 – 10	0 to 15	

Sl. No.	Test Conducted	Results	IS : 383 – 1970 Stipulations
1.	Silt Content (%)	1.45	-

* As furnished by the Customer

For **KARNATAKA TEST HOUSE PVT. LTD.**

(SREENIVASA.C)
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Report No. : KTH/ CEMENT/ 1875-3174/2013-2014 **Date: 11.12.2013**

PHYSICAL TEST REPORT ON CEMENT

Interim 3 & 7 days

Name of the Customer* : **The Assistant Executive Engineer,**
Vidyaranyapura Sub Division,
BBMP, Bangalore - 97.

Name of the Project* : Improvements to roads in Kuvempunagara 1st stage Rajakaluve beside roads in Ward No. 11.

Name of Contractor* : Mr. Subbanna, Bangalore.

Source of Sample : Supplied by the Customer.

Source of Sample : Supplied by the Customer.

Type of Cement* : Ordinary Portland cement (OPC)

Brand of Cement* : Birla Super 53 Grade.

Sample Received on : 02.12.2013.

Period of Test : 03.12.2013 to 10.12.2013.

Technical Reference : IS: 4031(Part I–VI) 1988 (Reaffirmed–2000) & IS: 12269-1987.

Sl. No.	Test Conducted	Results	IS : 12269-1987 Stipulation	Remarks
1	Normal consistency	29.0 %	Not specified	-
2	Initial setting time	174 minutes	Shall not be less than 30 minutes	P
3	Final setting time	248 minutes	Shall not be more than 600 minutes	P
4	Compressive strength (Average of three results) a. 72 ± 1h (3 days) b.168 ± 2h (7 days) c. 672 ± 4h (28 days)	 28.76 MPa 39.32 MPa T.T.C	 Shall not be less than 27.0 MPa Shall not be less than 37.0 MPa Shall not be less than 53.0 MPa	 P P -
5	Fineness (By Blaine's air permeability method)	334.21 m^2/kg	Shall not be less than 225 m^2/kg	P
6	Soundness (Le-chatlier's method)	1.03 mm	Shall not be more than 10 mm	P

P: Passes IS requirement F: Fails IS requirement T.T.C: Test To be Conducted.

*As furnished by the Customer

For **KARNATAKA TEST HOUSE PVT. LTD.**

KARNATAKA TEST HOUSE PVT.LTD. NABL Accredited Laboratory

(SREENIVASA.C.)
TECHNICAL MANAGER

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NABL Accredited Lab Certificate No.T-0901

Report No.: KTH/ST/1875-3175/2013-2014 **Date: 06.12.2013**

TEST REPORT ON STEEL BARS

Name of the Customer* : **The Assistant Executive Engineer,**
Vidyaranyapura Sub Division,
BBMP, Bangalore - 97.

Name of the Project* : Improvements to roads in Kuvempunagara 1st stage Rajakaluve beside roads in Ward No. 11.

Name of Contractor* : Mr. Subbanna, Bangalore.

Source of Sample : Supplied by the Customer.

Sample Received on : 02.12.2013.

Nature of Sample* : Reinforcement steel – 12mm & 16mm.

Technical Reference : Tensile IS: 1786 -- 2008 & IS: 1608–1995 (Reaffirmed–2000)
Bend & Re-bend IS: 1786 – 2008 & IS: 1599 - 1985 (Reaffirmed–2000)

Grade of Steel* : Fe-500.

TENSILE TEST:

Dia (mm)	**12**	**16**	**Limits as per IS : 1786-2008, Gr. Fe 500**
Weight / unit length (kg/m)	0.879	1.510	12mm – 0.844 Min 16mm – 1.501 Min
Yield Stress (N/mm^2)	575.02	507.56	500 Min
Tensile Strength (N/mm^2)	628.10	602.11	8% More than actual 0.2% proof stress but not less than 545 N/mm^2
% Elongation (on 5.65 √AG.L)	19.5	22.0	12.0 Min.

BEND TEST:

Sl. No.	*Dia (mm)*	*Mandrel diameter*	*Observations*
1.	12	3 dia	No cracks observed. Passes the test.
2.	16	3 dia	No cracks observed. Passes the test.

REBEND TEST:

Sl. No.	*Dia (mm)*	*Mandrel diameter*	*Observations*
1.	12	7 dia	No cracks observed. Passes the test.
2.	16	7 dia	No cracks observed. Passes the test.

* As furnished by the Customer

For **KARNATAKA TEST HOUSE PVT. LTD.**

(SREENIVASA.C.)
TECHNICAL MANAGER

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Report No. : KTH/CT/1875-3176/2013-2014 **Date: 03.12.2013**

TEST REPORT ON CONCRETE CUBES

To,

The Assistant Executive Engineer,
Vidyaranyapura Sub Division,
BBMP Bangalore.

Name of the Project*: - Improvements to roads in Kuvempunagara 1st stage Rajakaluve beside roads in Ward No. 11.

Name of the Contractor* : Mr. Subbanna, Bangalore.

Sample Received on: 02.12.2013

Compressive Strength test as per IS: 516-1959 (Reaffirmed 1999) has been conducted on the concrete cube specimens, supplied by the Customer and the results are tabulated here below:

Dimension of Specimen: 150mmx150mmx150mm

Sl. No	Cubes pertaining to the concrete cast at*(Details of structural member identification)	Grade of Concrete*	Date of casting*	Date of Testing	Age of Concrete on the date of test**	Contact area (mm^2)	Weight of Specimen (Kg)	Load in KN	Compressive Strength in N/mm^2	Remarks
1.	Culvert Concrete (RMC)	M_{20}	02.11.2013	02.12.2013	Above 28 days	22500	8.120	590	26.22	Pass
2.		"	"	"	"	"	8.470	553	24.58	Pass
3.		"	"	"	"	"	8.320	544	24.18	Pass

1 N/Sq.mm = 10Kg/Sq.cm.(Approx.)
*As Furnished by the Customer
**Based on the data furnished by the Customer
Note: A minimum of three cube specimens shall be supplied for testing as per IS:516-1959.

for ***KARNATAKA TEST HOUSE PVT. LTD.***

KARNATAKA TEST HOUSE PVT. LTD. BANGALORE-54

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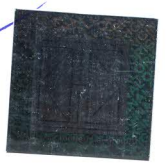

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